

AMENDMENT(S) TO THE SPECIFICATION

Please insert the following paragraph beginning at page 1, line 3:

CROSS REFERENCE TO RELATED APPLICATION

The present application is a 35 U.S.C. §§ 371 national phase conversion of PCT/EP2004/003354 filed 30 March 2004, which claims priority of German Application No. 103 14 733.0 filed 31 March 2003. The PCT International Application was published in the German language.

Please replace the paragraph beginning at page 1, line 3, with the following rewritten paragraph:

The invention relates to a transmission/heat exchanger unit, ~~in particular having the features from the preamble of claim 1.~~

Please replace the paragraph beginning at page 1, line 6, with the following rewritten paragraph:

~~It is known, when~~ When transmissions, in particular automatic transmissions, are used in drive trains, it is known to assign to these transmissions a heat exchanger which is arranged on the output side. In this case, the connection of the heat exchanger to the transmission takes place via hose lines and/or pipe lines. These must be adapted in terms of their layout to the requirements of the corresponding transmission and, furthermore, must be connected accordingly to the transmission and to the heat exchanger respectively. In the event of an improper connection or particular loads, leakage losses may occur, which result in a loss of fuel and an environmental hazard. This means that the time intervals for filling up with new fuel, that is ~~to say~~ with a medium which is necessary for operating the transmission, for example in the form of lubricant and/or control medium, are relatively short. A further substantial disadvantage of such a coupling between the heat exchanger and transmission is that the line routing must also be taken into account in the design of the transmission in respect of the construction space required.

Please replace the paragraph beginning at page 1, line 24, with the following rewritten paragraph:

To solve these problems, DE 196 25 357 A1 discloses a version with ducts for fuel and/or coolant which are integrated in the case wall of the transmission and which extend onto the end face of the transmission[[,]]. The ~~the~~ heat exchanger ~~being~~ is arranged on this end face. A substantial disadvantage of the direct arrangement, in particular by flanging, of the heat exchanger at the end of the transmission is, on the one hand, that the corresponding connections for fastening the heat exchanger and coupling the ducts must always be adapted to the actual heat exchanger solution. Furthermore, these must be designed correspondingly or additional measures must be taken in order always to ensure a ~~leaktight~~ leak tight connection of the heat exchanger.

Please replace the paragraph beginning at page 2, line 17, with the following rewritten paragraph:

A drive subassembly with a retarder and with a heat exchanger is already known from the publication EP 0 812 746 A2. In this case, the retarder, the heat exchanger, an adaptor and, if appropriate, a transmission are directly assembled together mechanically and are connected conductively to one another by means of the ducts of the adaptor. The retarder is flanged on the transmission. The adaptor performs a plurality of functions simultaneously: on the one hand, it connects said components mechanically and, furthermore, it makes conducting connections between these by means of its ducts. This solution allows a rapid and direct connection of the heat exchanger to the retarder, with hoses being avoided completely. In this case, as a rule, the adaptor is arranged in the rear region of the transmission and serves for coupling between the retarder and the heat exchanger. Via the heat exchanger, it is possible, furthermore, also to cool the media of other components. This, however, necessitates the correspondingly complicated line routing which, particularly with the retarder being interposed, either already has to be taken into account as a preliminary or else is ~~lead~~ led around the latter.

Please replace the paragraph beginning at page 4, line 23, with the following rewritten paragraph:

SUMMARY OF THE INVENTION

The object on which the invention is based was, therefore, to provide a transmission/heat exchanger unit for use in drive trains, in such a way that said disadvantages are avoided and, in particular, unnecessary leakage losses are ruled out and a simple and reliable fuel routing via the heat exchanger is ensured. Furthermore, the solution according to the invention is to be distinguished by a low outlay in structural and manufacturing terms. The number of components required needs to be minimized considerably and ~~leaktightness~~ leak tightness and a low-stress coupling of the most diverse possible heat exchangers to the transmission are to be ensured.

Please delete the paragraph beginning at page 5, line 9.

Please replace the paragraph beginning at page 5, line 12, with the following rewritten paragraph:

According to the invention, in the transmission/heat exchanger unit, the heat exchanger is arranged on the transmission, preferably directly on the output side. The tie-up of the heat exchanger in this case takes place via a retaining device[[,]]. ~~The~~ the retaining device ~~being~~ is fastened to the transmission, in particular the output-side end face of the case of the transmission. According to the invention, the connecting lines between the transmission and the heat exchanger, which function as a supply and discharge line coming from the heat exchanger, are integrated at least partially into the wall of the retaining device, that is ~~to say~~ integrally formed on ~~this, and~~ the wall to form part of the wall. Preferably, they may also be arranged completely in the wall of the retaining device, that is to say be surrounded completely by the retaining device. As a result, the connecting lines functioning as a supply and discharge line to and from the heat exchanger become integral parts of the retaining device. The line paths between the output from the transmission and the input to the heat exchanger can thereby be kept very short. Furthermore, the space used in ~~case~~ the housing for the retaining

device is utilized in an optimum way, so that no additional construction space has to be taken into account in the design of the transmission/heat exchanger unit. The connections on the heat exchanger are not subjected to bending stress, as in the case of solutions directly flanged on.

Please replace the paragraph beginning at page 6, line 12, with the following rewritten paragraph:

By means of "intelligent" holders, [[a]] variability for a multiplicity of applications can in this case be achieved, in particular because the changes of heat exchangers, in comparison with holders, are very complicated and consequently entail high costs.

Please replace the paragraph beginning at page 6, line 25, with the following rewritten paragraph:

The retaining device in this case assumes mainly the carrying and supporting function for the heat exchanger and, furthermore, an adaptor function for the connection of different heat exchangers. Preferably, for this purpose, the mutually complementarily designed connections for ~~the~~ fastening the heat exchanger are arranged on the output-side end face of the case[[, the]]. This arrangement preferably ~~is taking place~~ in a case wall region reinforced in a plane oriented transversely to the axis of rotation. This reinforcement in this instance extends over the entire axial extent of the transmission case or else at least over that part in which the fuel-routing ducts are arranged.

Please replace the paragraph beginning at page 9, line 25, with the following rewritten paragraphs:

BRIEF DESCRIPTION OF THE DRAWING

The solution according to the invention is explained below by means of ~~a figure.~~ Figure 1 ~~makes clear in which is a diagrammatic simplified illustration, by means of in perspective view~~[[,]] of the basic setup of a transmission/heat exchanger unit [[1]] configured according to the invention.

DESCRIPTION OF A PREFERRED EMBODIMENT

A heat exchanger unit 1 ~~The latter~~ comprises a transmission 2 with an input E couplable to an engine and with at least one output A. ~~Also provided is a~~ A heat exchanger 3 ~~which is assigned to the transmission 2 on the output side, that is to say at the output A, and which it can be coupled at least indirectly to the fuel-routing lines and/or ducts 4 of the transmission. The heat exchanger 3 is in this instance mounted on the transmission 2, in particular on its case 6, via a retaining device 5. According to the invention, the connecting lines 7 and 8 between the heat exchanger 3 and the transmission 2 are integrated in the retaining device 5. These connecting lines are designed here by 7 and 8.~~ In this instance, at least in each case two connecting lines, in the instance illustrated the connecting line 7 and the connecting line 8, are provided. ~~Depending, and, depending~~ on the functional assignment, one of the two connecting lines functions as an inflow line to the heat exchanger 3, while the other ~~assumes the function of~~ functions as the outflow line. In the instance illustrated, for example, the connecting line 7 functions as an inflow line and the connecting line 8 as an outflow line. The two connecting lines are connected to corresponding lines or ducts 4 in the transmission 2. These are preferably lines or ducts which are integrated in the wall 9 of the case 6 and ~~which they~~ serve for the routing of media required for operating the structural transmission unit. These are, as a rule, the transmission oil which is used for the purpose of lubrication or else for the purpose of the activation of shift elements. The ~~fuel oil~~ oil is also used for the purpose of cooling and for hydrodynamics, that is to say the transmission of power in the converter. It is conceivable, furthermore, for the ~~fuel oil~~ oil to supply hydrodynamic components. Here, too, at least two lines 4.1 and 4.2 are provided, one being couplable to the connecting line 7 arranged in the retaining device 5 and functioning as an inflow line, while the other can be connected to the connecting line 8

arranged in the retaining device 5, so as to form a circuit 10. Coupling takes place via corresponding connections 11 and 12 on the case 6. Two fuel-routing lines or ducts 4.1 and 4.2 or connecting lines 7 and 8 are illustrated, but it is also conceivable to use a plurality of such ducts and lines which, however, must be equipped appropriately complementarily to one another or with corresponding connections on the case 6 of the transmission 2 and the retaining device 5. In this instance, the connections 11 and 12 on the output-side end face 13 of the transmission 2 can then be connected to connections 14 and 15 on the end face 16 facing the transmission 2. This type of connection may be implemented in many different ways. It is critical merely that the connections 11 and 12 and also 14 and 15 are designed complementarily to one another, so that, in actual fact, a circuit 10 which may be designed as an open or closed circuit is produced. The coupling implemented between the individual connections 11 and 14 or 12 and 15 may be designed in many different ways. This may take place positively and/or nonpositively. Preferably, however, the retaining device 5 is braced in the axial direction with respect to the case 6, using interposed seals 17. Insertion tubes with corresponding seals are often also used alone or even in conjunction with the flat seals described. The retaining device is mounted on the case via the fastening on the case, which fastening may take place nonpositively and/or positively.

Please delete page 14 in its entirety.